



City of Pleasant Hill

February 3, 2014

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

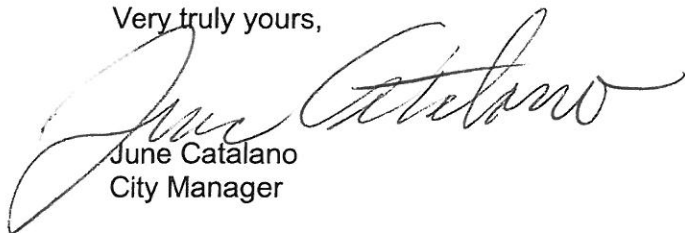
Ms. Pamela Creedon, Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Mr. Wolfe and Ms. Creedon:

Enclosed is the February 2014 Long-Term Trash Load Reduction Plan for the City of Pleasant Hill, which is required by and in accordance with Provision C.10.c in National Pollutant Discharge Elimination System (NPDES) Permit Number CAS612008 issued by the San Francisco Bay Regional Water Quality Control Board and/or by Provision C.10.c in NPDES Permit Number CA0083313 issued by the Central Valley Regional Water Quality Control Board.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Very truly yours,



June Catalano
City Manager

Enclosure

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City of Pleasant Hill
Trash Management Plan
2014-2022

Submitted to the
California Regional Water Quality Control Board for the San Francisco Bay Region
February 1, 2014
in compliance with Provision C.10 of the Municipal Regional Stormwater Permit

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Attachment

Maps of Pleasant Hill showing Trash Generation Rates and Trash Management Areas

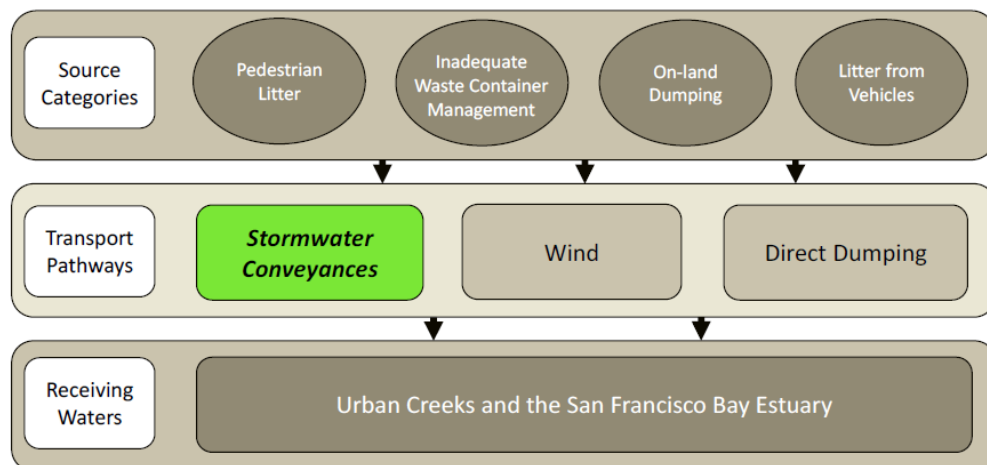
1. Introduction by the Contra Costa Clean Water Program (CCCWP)

Contra Costa municipalities have prepared Long-Term Trash Reduction Plans (Plans) in compliance with Provision C.10.c. of the Municipal Regional Stormwater Permit¹ (MRP). Each municipal plan describes control measures and best management practices (BMPs) designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022.

A. Trash Sources, Pathways, and Loadings

Figure 1 illustrates sources and pathways of trash that enters the region's creeks and San Francisco Bay. Trash has multiple sources—all of which are episodic and widely dispersed.

In Figure 1, *Stormwater Conveyances* is highlighted because *only this pathway* is subject to MRP trash-reduction requirements. In reality, the other pathways are equally significant, depending on time and location. In practical terms, the pathways are intertwined. For example, on-land clean-ups reduce trash entering storm drains and also reduce wind-blown trash. When visible trash is reduced, litter and dumping



from all sources tends to become less frequent and severe.

Figure 1. Trash sources and transport pathways.

Municipalities must balance their commitment to MRP compliance with their commitment to preserving and enhancing local environmental quality and quality of life for their residents. That is, municipalities seek to reduce trash on local streets and roads, and to reduce the *total* amount of trash in their creeks and on their shorelines—in addition to fulfilling the Water Board's mandate to eliminate trash that flows through storm drains.

For these reasons, Contra Costa municipalities address trash holistically and comprehensively, integrating a variety of strategies, and uses a variety of methods to assess the success of those strategies.

B. Background for this Plan

MRP Provision C.10 requires the Permittees to reduce trash loads from their storm drains by 40% by 2014, 70% by 2017, and 100% by 2022.

¹ Order R2-2009-0074, issued by the California Regional Water Quality Control Board for the San Francisco Bay Region, became effective on December 1, 2009 and applies to 76 cities, towns, counties, and flood control districts.

Provision C.10.a.ii. required each Permittee to determine a baseline trash load and a method for tracking reductions in trash loads. Working collectively through the Bay Area Stormwater Management Agencies Association (BASMAA)—and in close collaboration with Water Board staff—the Permittees developed methods, including a calculator, for tracking loads and load reductions.

The Permittees used these methods to develop Short-Term Trash Load Reduction Plans by February 1, 2012, and are implementing those plans through July 1, 2014 to achieve the 40% reduction. Progress has been documented in the Permittees' 2012 and 2013 Annual Reports.

Following their review of the Short-Term Plans, Water Board staff requested Permittees to change the methods used to evaluate trash load reductions. Working collectively through BASMAA—and again in close collaboration with Water Board staff—the Permittees developed the framework and planning tools to be used in the Permittees Long-Term Plans.

C. Framework for Long-Term Trash Management

The following 8-step framework was developed²:

1. Identify high, medium, and low trash generation areas, based on land use and other geographic data, local knowledge, and field verification.
2. Attempt to identify sources in high and medium trash generation areas to assist in focusing control measures.
3. Prioritize areas and problems/types.
4. Identify options (tools) for dealing with prioritized areas/problems.
5. Define success/goals and measurement type.
6. Select and implement tools.
7. Evaluate success.
8. Modify as needed.

Steps 5 and 7 of this framework acknowledge fundamental challenges presented by Provision C.10—how to define and evaluate success.

D. Identifying High-Trash Areas

To implement the first step of the framework—to identify high, medium, and low trash-generation areas—the Permittees collectively, through BASMAA, developed and calibrated a predictive model of trash generation.³ Model variables are designated land use and 2010 median household income; the model was calibrated based on trash collected in full-trash-capture devices (BASMAA, 2012a, BASMAA, 2012b).

The Permittees applied the model as follows: The model was used to generate a preliminary map designating very high, high, moderate, and low trash generation areas. Local municipal staff reviewed the preliminary map and identified areas that had incorrect designations based on local knowledge of actual land uses and of trash generation rates (CCCWP, 2013). Specific methods used to verify local trash generation rates are documented in Section 2 below and may include queries of municipal staff or members of the public, reviews of municipal operations data, viewing areas using Google Maps and Street View, application of BASMAA's On-Land Visual Trash Assessment Protocol (BASMAA, 2013), or other methods.

² The framework was developed in a November 1, 2012 meeting at Water Board staff offices and was refined in subsequent meetings with Water Board staff.

³ "Generation" is understood to be the volume of trash potentially available to be transported from the urban watershed (per acre, per year) into the storm drains in the absence of any control measures and BMPs.

E. Trash Management Strategy

Municipalities delineated Trash Management Areas (TMAs) within their jurisdictions. TMA boundaries are based on land uses, drainage areas, management areas, and/or geographic considerations, and are drawn to facilitate focused and efficient efforts to reduce trash in areas with very high, high, and medium trash generation rates. The rationale for delineating TMAs in the specific municipality, an overview of the municipality's trash management approach, and a description of activities that apply throughout the municipality (including hot spot cleanups, jurisdiction-wide policies, and jurisdiction-wide public outreach) is in Section 3.

Section 4 consists of individual summary plans for each municipal TMA. Each TMA plan describes the key TMA characteristics, summarizes control measures, and describes methods for evaluating effectiveness of efforts within the TMA.

F. Assessing Effectiveness

Each TMA summary plan includes methods to evaluate effectiveness. As indicated in the framework, the primary purpose of these evaluations is to facilitate continuous improvement of control measures within the TMA. Continuous improvement requires TMA-specific interpretation of results, including consideration of factors that may have contributed to success, or lack of success, at that locale during the evaluation period. Evaluations of effectiveness and adjustments to the TMA summary plans will be included in each annual report.

A secondary purpose of the evaluation methods is to contribute evidence toward an annual general evaluation of progress toward MRP goals. Such an evaluation will be based on weight-of-evidence, using the results from TMA-level evaluations of the effectiveness of specific actions within the TMA, and of the total of TMA-level actions, during the reporting period. A jurisdiction-wide assessment of progress will be compiled by combining this TMA-level evidence with the results of hot spot cleanups, visual assessments of creeks and shorelines, and observations by local residents and cleanup participants. As additional outcome-based assessment methods are devised and pilot tested—regionally and statewide—information derived from these methods will be incorporated into annual progress assessments.

2. City of Pleasant Hill Trash Management Overview

A. Characteristics Affecting Trash Generation and Management

Demographic data from the 2010 census is presented in Table 2-1.

Table 2-1. 2010 Census Data

Population	33,152
Under 18	6,564 (19.8%)
18-24	3,183 (9.6%)
25-44	8,885 (26.8%)
45-64	9,912 (29.9%)
65 and older	4,608 (13.9%)
Median household income	\$67,489⁴

Table 2-2 presents summarizes land uses within the City of Pleasant Hill.

Table 2-2. 2005 Land Uses (ABAG)

Land Use Category	Jurisdictional Area	% of Jurisdictional Area
Commercial and Services	253.2	5.8%
Industrial	25.3	0.6%
Residential	2889.1	66.5%
Retail	271.2	6.2%
K-12 Schools	176.0	4.1%
Urban Parks	121.7	2.8%
Other	609.6	14.0%

Roughly two-thirds of the City of Pleasant Hill is residential neighborhoods. This would seem to coincide with a large number of schools and school age kids. However, based on the demographics, the majority of the City's population is 25 and over. The population of school kids attending each school is lower than other schools in the area of similar size. This seems to coincide with staffs' observations of trash in these areas, while higher than non-school residential areas, is not the highest trash generator in the City. Overall, the major trash generators in the City are centralized in retail areas (i.e. Downtown Pleasant Hill, along Contra Costa Boulevard, Crossroads Shopping Center, and Target shopping center).

B. Drainage System and Water Resources Affected by Trash

The City's storm drain and creek system includes the following creeks: Grayson Creek, East Branch of Grayson Creek, Murderer's Creek and Hidden Valley Creek, all within the Grayson Creek watershed.

The County maintained portion of Grayson Creek is located within TMA #5, and is impacted by trash from the adjoining commercial areas and school. Grayson Creek also runs through residential areas of TMA #4 and TMA #10, and is impacted by leaves and other debris.

The East Branch of Grayson Creek also runs along the residential area and a school in TMA#4 and TMA #9, and impacted by leaves.

⁴ From 2000 Census. The median household income for the City of Pleasant Hill from 2010 Census is not currently available.

Murderers Creek runs along the residential portions of TMA #9 and TMA #8, and is impacted by leaves.

C. Trash Problems and Priorities

The City submitted a Baseline Trash Load and Short-Term Trash Load Reduction plan as required by Provision C.10 of the Municipal Regional Permit. Preliminary estimates of trash loads were provided, and maps created as part of the BASMAA regional collaborative project to develop trash loads for jurisdictions in the bay area.

These maps were the basis for determining how the City can best address the trash issues in the City. Engineering and maintenance staff held meetings and discussed modifying the maps to be consistent with field observations. Engineering staff also verified the trash load map categories based on the BASMAA On-Land Visual Assessment Protocol. Staff intends to continue this process on a regular basis to refine the maps.

The City's main priorities are to reduce trash in high generating areas, such as the Downtown area, and retail areas, such as the Crossroads shopping center, and Target shopping center.

Table 2-3 summarizes trash generation by land use:

Table 2-3. Trash Generation Category by Land Use								
Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	21.9	0%	0%	0%	100%	0%	0%	0%
High	371.4	0%	0%	35.7%	64.3%	0%	0%	0%
Medium	1,080.3	23.2%	2.3%	46.0%	0.9%	16.3%	11.3%	0%
Low	2,872.6	0.1%	0%	78.7%	0%	0%	0%	21.2%

3. City of Pleasant Hill Trash Management Strategy

The following trash management strategy is designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022. The strategy may be updated and revised in response to changing conditions, including the amounts and location of trash generation, effectiveness of management actions, and available resources. Updates will be documented in Annual Reports.

The City of Pleasant Hill's overall trash management strategy is to utilize City staff and resources and take advantage of development opportunities to achieve the overall goal. Highlights of the City's strategic plan include the following:

Full Capture Treatment Devices: The City participated in the pilot program that installed REM filter devices in the downtown area and along selected zones where high volumes of trash have been observed. The City requires that all new developments (i.e. In N Out Burger, new Safeway fueling center, Nordstrom rack, etc...) install trash capture devices in new and existing inlets, as part of the project Conditions of Approval. The commercial redevelopment of many areas in Pleasant Hill has provided the City the opportunity to install these devices at no cost to the City. Maintenance is also required by the developer as part an agreement that is recorded against the property.

Enhanced Street Sweeping: The City recently negotiated with the local waste handler to have the street sweeping included as part of the franchise agreement, without increasing fees. This again, provided an opportunity to reduce trash in the City at no cost to the resident or the City. Staff will continue to look at increasing the frequency of sweeping in high trash generating areas, pending re-negotiation of the waste contract, and availability of funds.

On-land trash pickup: Maintenance staff time and resources are limited. The TMAs were broken up geographically to match maintenance staff assignments. In order to enhance on-land trash pickups, staff is considering re-prioritizing work to include more time spent on trash pickups in high trash generating areas (adjacent to arterials, collectors, retail, and school areas) rather than landscape maintenance.

Staff firmly believes that these improvements, in conjunction with the City's other MRP required activities, such as public outreach, will achieve the long term trash management goals set forth by the Regional Board.

A. Delineation of Trash Management Areas

Engineering staff met and discussed with Maintenance staff on how to best implement the trash management goals of the City. Trash Management Areas (TMAs) were first defined by land use and then further refined based on trash generation rates. However, discussion with maintenance staff revealed that the most efficient way to manage the trash would be to delineate the areas based on staff's current landscape management areas. This appeared to coincide with areas targeted for enhanced trash management as well (i.e. commercial/retail). Staff will continue to analyze the TMAs to evaluate efficiency.

Table 3-1. Trash Generation Category by Trash Management Area

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1	148.7	0%	49.4%	40.9%	9.7%
TMA 2	156.4	14.0%	78.1%	4.3%	3.6%
TMA 3	21.8	0%	100%	0%	0%
TMA 4	723.2	0%	0.7%	13.6%	85.6%
TMA 5	635.2	0%	1.1%	18.8%	80.1%
TMA 6	222.8	0%	52.0%	35.6%	12.4%
TMA 7	212.9	0%	3.1%	90.7%	6.2%
TMA 8	242.9	0%	0.3%	93.4%	6.2%
TMA 9	676.7	0%	2.2%	32.8%	64.9%
TMA 10	612.6	0%	0%	10.8%	89.2%
TMA 11	296.0	0%	1.3%	2.4%	96.3%
TMA 12	397.0	0%	0%	0%	100%

B. Area-Specific Control Measures, Implementation Schedules, and Effectiveness Assessment

Long-Term Trash Reduction Plans for each Trash Management Area, including control measures, detailed implementation plans, and methods of assessing the effectiveness of control measures are in Section 4.

C. Creek and Shoreline Cleanups**Table 3-2. Creek and Shoreline Cleanups**

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
PLH-01	East Branch Grayson Creek	Quarterly	Quarterly	TBD	TBD
PLH-02	Grayson Creek	Quarterly	Quarterly	TBD	TBD

The City of Pleasant Hill has 2 “hot spots” required under the current MRP. Staff has observed the predominant sources of trash to be pedestrian related (food trash, paper) at both locations (PLH-01 is located adjacent to a shopping center, and PLH-02 is located adjacent to a trail and K-12 school).

D. Trash Reduction Policies

The City of Pleasant Hill has in its Municipal Code many anti-littering policies. The Solid Waste Ordinance restricts littering in relation to garbage pickup, and the Building Ordinance restricts littering in relation to demolition and construction. There are also provisions in the Zoning Ordinance that restrict littering related to advertising and regulating outdoor seating for restaurants. Lastly, the Stormwater Ordinance restricts littering anywhere it can enter the creek and storm drain system. A violation of any these anti-littering ordinances are considered a public nuisance and enforceable as such.

E. Public Education, Outreach, and Community Involvement

Through the CCCWP, the Permittees conducted a “Litter Travels, But It Can Stop with You” multi-year campaign beginning in FY 2009-2010. The multi-media campaign was designed to educate Contra Costa’s citizens about the impacts of trash and litter in the County’s waterways and how they can help address this problem and included TV spots, billboards, posters at BART stations, placards on transit

buses, print ads and updates to the CCCWP website. Other outreach included more than 10,000 letters to County residents, contact with youth sports leagues, outreach to the 17 school districts in the County, and distribution of flyers to students in 5 of those districts. Pre and post-campaign surveys were conducted.

Through the CCCWP, Permittees also support the work of the California Product Stewardship Council (CPSC) and the Green Business Program. Both of these organizations address trash through source reduction and waste management. CPSC's mission is to promote Extended Producer Responsibility (EPR), which is based upon shifting California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design that promote environmental sustainability. The CPSC's position is that the producers should have the primary responsibility to establish, fund, and manage end of life systems for their products. CPSC has advocated for EPR legislation affecting a wide-range of products including pharmaceuticals, batteries, paint, sharps, and mattresses.

The Green Business Program, of which CCCWP is the largest contributing Partner in Contra Costa County, is designed to publicly recognize private businesses and public agencies that take extra steps, beyond baseline compliance with environmental regulations, to prevent pollution and save resources (e.g., conserve water and energy, reduce waste through reuse and recycling, prevent stormwater pollution through good housekeeping practices, etc.). To date, 530 businesses have been certified as Green Businesses in Contra Costa County. Currently, 334 businesses are certified including a large number of auto repair shops, landscapers, waste haulers, printers, grocery and hardware stores, solar panel installers, and home remodelers. Numerous public agencies have also been certified. Municipal stormwater and POTW inspectors assist the Green Business program by encouraging potential Green Business candidates. CCCWP staff serves on the Green Business Program's "Partners Committee" and actively engages in development of the Green Business checklist (i.e., the stormwater pollution prevention section that each business needs to complete before becoming certified as a green business). Some of the more relevant actions that businesses have undertaken to become certified or recertified that also reduce trash loads include the following: commit to reduce waste in a minimum of five ways, maintain parking areas free of litter, keep dumpsters covered when not in use, ensure tarps for covering loads are in good condition and used correctly, and purchase a minimum of three recycled-content products.

To address trash from illegal dumping, the CCCWP operates a 1-800-No-Dumping hotline. The hotline is used by both businesses and the public to report potentially illegal dumping activities. All hotline calls are referred to the appropriate municipality for follow-up and, if necessary, enforcement. Calls have been logged since FY 2004-2005. Calls to the hotline are combined with calls that come directly to municipalities and Contra Costa County Hazardous Materials (Hazmat) Division and are tracked and documented annually in the municipal annual reports.

The CCCWP will continue to identify new partners and areas of outreach for source reduction and measures to reduce trash in the environment. CCCWP is currently in contact with California Department of Transportation (Office of Stormwater Program Development) and hopes to identify trash load reduction projects in Contra Costa County that would be financially and strategically feasible for all involved parties. CCCWP has also made contact with the California Highway Patrol, Contra Costa County Solid Waste Authority, and a number of transfer stations to potentially develop additional outreach materials to reduce litter from uncovered loads. The City publishes the Outlook newsletter bi-monthly. This is the most useful tool to distribute information about anti-littering, as the newsletter is distributed to all properties in the City, in addition to businesses and the Chamber of Commerce.

The City requires all new development projects to install “No Dumping, Drains to Creek” markers on all storm drain inlets. This has been especially helpful with new projects (such as the new Community Center and Pleasant Oak Park projects, which have high exposure to residents). Staff also annually inspects all existing markers, and replaces them as needed.

The City also sponsors the Kids for the Bay Watershed Action Program for kids, which targets 2 elementary classrooms each year. The program gives students in grades 3-5 the opportunity to learn about and care for their local watershed. The program uses hands-on science experiments and activities, to focus on watersheds, urban run-off pollution, food chains, bay organisms, and environmental justice.

F. Jurisdiction-wide Progress Assessment and Continuous Improvement

Engineering staff will coordinate activities to assess jurisdiction-wide progress. Staff will meet regularly with the maintenance supervisor to review data and analyze trends. Staff will also coordinate with the Executive team to determine how to manage resources, include staff and funding, in order to achieve the City’s trash management objectives. If changes to the management strategy are necessary that have a significant impact to City resources, then staff will address this with the City Council as part of the bi-annual City budget review process.

4. Trash Management Area Plans

A. TMA-Specific Plans

TMA-specific plans for 14 areas are attached.

5. References

BASMAA 2012a. Bay Area Stormwater Management Agencies Association. Trash Generation Rates for San Francisco Bay Area MS4s (Draft Final). Presentation to the BASMAA Trash Committee, August 2012. Prepared by EOA, Inc.

BASMAA 2012b. Baseline Trash Generation Rates, Preliminary Calibration of Modeled Results, Presentation to BASMAA Trash Committee, September, 2012. Prepared by EOA, Inc.

BASMAA 2013a. Visual On-Land Trash Assessment Protocol for Stormwater, Version 1.0 (Draft). April 30, 2013. Prepared by EOA, Inc.

CCCWP, 2013. Contra Costa Clean Water Program. Long-Term Trash Load Reduction Plan Development—Trash Generation Map Refinements. Technical Memorandum, May 20, 2013. Prepared by EOA, Inc.

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

1

This TMA was based on land use (downtown retail) and staff resources.

Key Characteristics of Trash Management Area 1

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
148.7	0%	49.4%	40.9%	9.7%	Retail and Commercial	Food containers, paper

Downtown Pleasant Hill and Contra Costa Boulevard

Summary of Control Measures and Implementation Schedule for Trash Management Area 1

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	REM petroleum filters installed in downtown, changed to trash filter in 2012; more REM filters installed with ABAG grant funds in 2012	X	X	X	X
Enhanced Street Sweeping	Consider increasing frequency in high-generation areas, pending contract negotiations and funding			X	X
On-land Trash Cleanups	Increase frequency and staff time on clean ups			X	X
Enhanced Storm Drain Inlet Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X
Anti-littering and Illegal Dumping Enforcement	Increase frequency and staff time on inspections			X	X
Improved Trash Bins/Container Management	Downtown trash bins maintained by property management; parks district staff cleans out bins in parks; Increase City staff time cleaning bins at bus stops	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 1

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed
On-land Trash Cleanups and Anti-littering Enforcement	Visual	Visually assess for trends

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

2

This TMA was based on land use (retail) and staff resources.

Key Characteristics of Trash Management Area 2

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
156.4	14.0%	73.1%	4.3%	3.6%	Retail and Commercial	Food containers, paper

Target shopping center and surrounding retail

Summary of Control Measures and Implementation Schedule for Trash Management Area 2

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	FloGuard+ filters and C.3 bioswales installed with construction of new In N Out restaurant, new Safeway fuel center, and Nordstrom Rack projects		X	X	X
Enhanced Street Sweeping	Consider increasing frequency in high-generation areas, pending contract negotiations and funding			X	X
On-land Trash Cleanups	Increase frequency and staff time on clean ups			X	X
Enhanced Storm Drain Inlet Maintenance	FloGuard+ filters are cleaned out per manufacturer recommended specifications		X	X	X
Anti-littering and Illegal Dumping Enforcement	Increase frequency and staff time on inspections			X	X

Evaluation of Program Effectiveness for Trash Management Area 2

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed
On-land Trash Cleanups and Anti-littering Enforcement	Visual	Visually assess for trends

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

3

This TMA was based on land use (retail) and staff resources.

Key Characteristics of Trash Management Area 3

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
21.8	0%	100%	0 %	0%	Retail	Food containers, paper, debris

Crossroads Shopping Center

Summary of Control Measures and Implementation Schedule for Trash Management Area 3

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	REM filters and C.3 bioswales to be installed with construction of new Dicks Sporting Goods			X	X
Enhanced Street Sweeping	Consider increasing frequency in high-generation areas, pending contract negotiations and funding			X	X
On-land Trash Cleanups	Increase frequency and staff time on clean ups			X	X
Enhanced Storm Drain Inlet Maintenance	REM filters are cleaned out per manufacturer recommended specifications			X	X

Evaluation of Program Effectiveness for Trash Management Area 3

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed
On-land Trash Cleanups	Visual	Visually assess for trends

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 4

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
723.2	0%	0.7%	13.6%	85.6%	Residential and school	Leaves, food trash

Residential area, bounded by Gregory Lane on the south, Pleasant Hill Road on the west, Taylor Blvd on the north and Contra Costa Blvd on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 4

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	5 REM filters installed in 2012 adjacent to school C.3 bioswales installed with Rec & Park new Senior and Teen Center projects		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Enhanced Storm Drain Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 4

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

5

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 5

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
635.2	0%	1.1%	18.8%	80.1%	Residential and school	Leaves, food trash

Residential area, bounded by Taylor Blvd on the south, Morello Ave on the west, Golf Club Rd on the north and Contra Costa Blvd on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 5

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	4 REM filters installed in 2012 adjacent to school		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Enhanced Storm Drain Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 5

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

6

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 6

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
222.8	0%	52.0%	35.65	12.4%	Residential and commercial	Debris, food trash

Residential and commercial area, bounded by city limits on the south, I-680 on the west, Walnut Creek on the north and city limits on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 6

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	C.3 Bioswale to be constructed as part of Buskirk Ave improvement project			X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Improved Trash Bin/Container Management	Increase staff time cleaning bins at bus stops Doggie bins to be installed as part of Buskirk Ave improvement project			X	X

Evaluation of Program Effectiveness for Trash Management Area 6

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

7

This TMA was based on land use (residential and commercial) and staff resources.

Key Characteristics of Trash Management Area 7

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
212.9	0%	3.1%	90.7%	6.2%	Residential and commercial	Debris, food trash

Residential and commercial area, bounded by I-680 on the south, Contra Costa Blvd on the west, Willow Pass Rd on the north and Walnut Creek on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 7

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	CDS unit installed in 2000	X	X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Improved Trash Bin/Container Management	Increase staff time cleaning bins at bus stops			X	X
Creek, Channel, Shoreline Cleanups	Increase support to the Friends of Ellinwood Creek group			X	X

Evaluation of Program Effectiveness for Trash Management Area 7

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 8

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
242.9	0%	0.3%	93.4%	6.2%	Residential	Leaves, food trash

Residential area, bounded by city limits on the south, city limits on the west, Oak Park Blvd on the north and city limits on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 8

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	C.3 bioswales installed with new development projects (Rainbow Estates subdivision and Oak Park Church) and with City's Geary Road improvements	X	X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Anti-littering and Illegal Dumping Enforcement	Increase frequency and staff time on inspections near creeks			X	X
Improved Trash Bin/Container Management	Increase staff time cleaning bins at bus stops			X	X

Evaluation of Program Effectiveness for Trash Management Area 8

Control Measure	Evaluation Method	Evaluation Method Details
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed
Anti-littering Enforcement	Visual	Visually assess for trends

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 9

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
676.7	0%	2.2%	32.8%	64.9%	Residential and school	Leaves, food trash

Residential area, bounded by Oak Park Blvd on the south, Pleasant Hill Rd on the west, Gregory Ln on the north and Contra Cost Blvd on the east

Summary of Control Measures and Implementation Schedule for Trash Management Area 9

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	REM device installed with ABAG grant funds in 2012 C.3 bioswales installed with new Pleasant Oaks Park project		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Anti-littering and Illegal Dumping Enforcement	Increase frequency and staff time on inspections near creeks			X	X

Evaluation of Program Effectiveness for Trash Management Area 9

Control Measure	Evaluation Method	Evaluation Method Details
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed
Anti-littering Enforcement	Visual	Visually assess for trends

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

10

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 10

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
612.6	0%	0%	10.8%	89.2%	Residential and golf course	Leaves

Residential area, bounded by city limits on the north and west, and Pleasant Hill Rd on the south and east

Summary of Control Measures and Implementation Schedule for Trash Management Area 10

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	9 REM filters installed with ABAG grant funds in 2012		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Enhanced Storm Drain Inlet Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 10

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

City of Pleasant Hill Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

11

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 11

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
296.0	0%	1.3%	2.4%	96.3%	Residential and open space	Leaves

Residential area, bounded by Paso Nogal Rd and Morello Ave to the north, and Pleasant Hill Rd and Taylor Blvd to the south

Summary of Control Measures and Implementation Schedule for Trash Management Area 11

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	REM filter installed with ABAG grant funds in 2012		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Enhanced Storm Drain Inlet Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 11

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

This TMA was based on land use (residential) and staff resources.

Key Characteristics of Trash Management Area 12

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
397.0	0%	0%	0%	100%	Residential and open space	Leaves

Residential area, bounded by city limits on the north and west, and Paso Nogal Rd on the south and east

Summary of Control Measures and Implementation Schedule for Trash Management Area 12

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	REM filter installed with ABAG grant funds in 2012		X	X	X
Enhanced Street Sweeping	Consider increasing frequency, pending contract negotiations and funding			X	X
Enhanced Storm Drain Inlet Maintenance	REM filters are cleaned out per manufacturer recommended specifications		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 12

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance	Track amount of trash removed
Enhanced Street Sweeping	Document maintenance	Track amount of trash removed

City of Pleasant Hill Long-Term Trash Reduction Plan

This TMA is Citywide

TRASH MANAGEMENT AREA

13

Key Characteristics of Trash Management Area 13

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
4346.2	0.5%	8.5%	24.9%	66.1%	Residential	Leaves, debris

Citywide

Summary of Control Measures and Implementation Schedule for Trash Management Area 13

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Anti-littering and Illegal Dumping Enforcement	Increase frequency of articles in citywide Outlook newsletter related to littering	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 12

Control Measure	Evaluation Method	Evaluation Method Details
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City of Pleasant Hill Long-Term Trash Reduction Plan

This TMA is Caltrans ROW

TRASH MANAGEMENT AREA

14

Key Characteristics of Trash Management Area 14

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
0.0	0%	0%	0%	0%	Freeway	Debris

Caltrans ROW

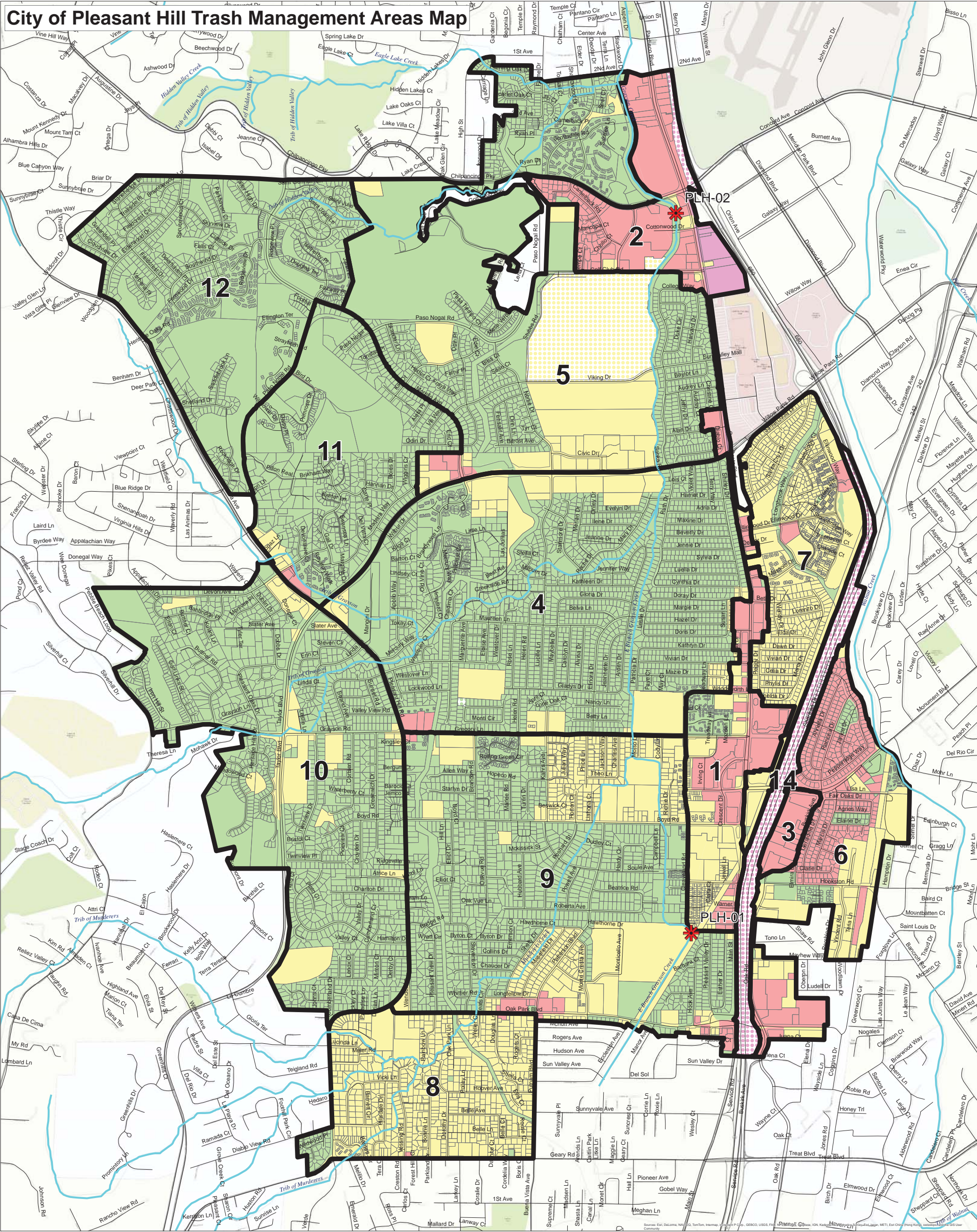
Summary of Control Measures and Implementation Schedule for Trash Management Area 14

Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Activities to Reduce Trash from Uncovered Loads	Coordinate on countywide level with Caltrans			X	X

Evaluation of Program Effectiveness for Trash Management Area 14

Control Measure	Evaluation Method	Evaluation Method Details
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City of Pleasant Hill Trash Management Areas Map



Legend

Trash Generation Category

Low

Medium

High

Very High

Creek/Shoreline Hotspot

Trash Management Area

Non-Jurisdictional (Dot color = Generation Category)

Streets

Agency Boundary

Creeks

Parcel Boundary

0

0.25

0.5

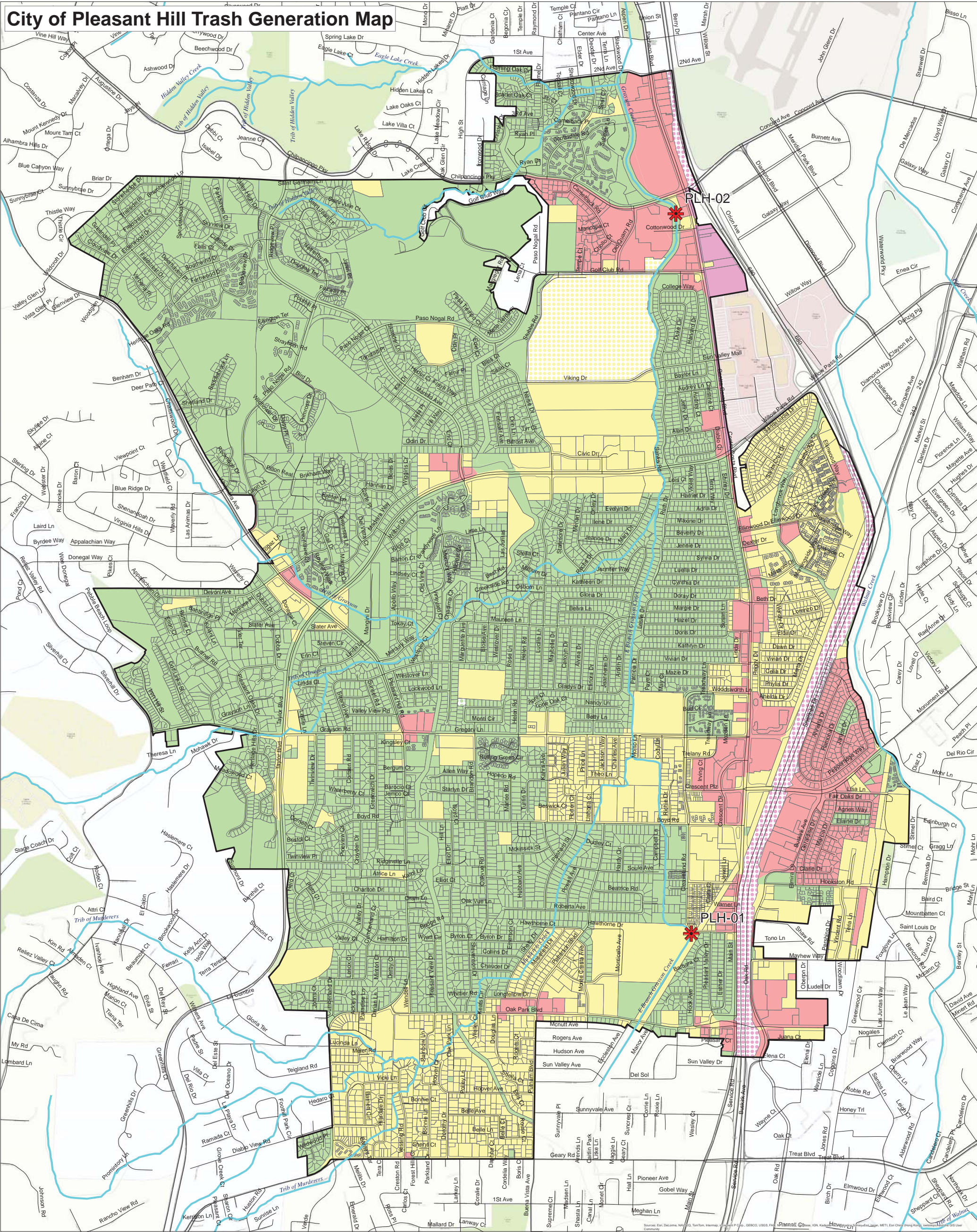
1 Miles

Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map

Map Created By:
EOA, Inc.

Date:
December 3rd, 2013

City of Pleasant Hill Trash Generation Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

Creek/Shoreline Hotspot

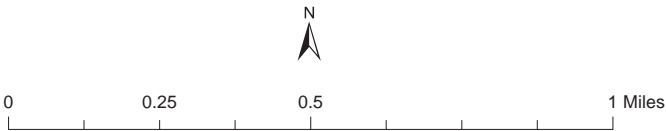
Non-Jurisdictional (Dot color = Generation Category)

Streets

Agency Boundary

Creeks

Parcel Boundary

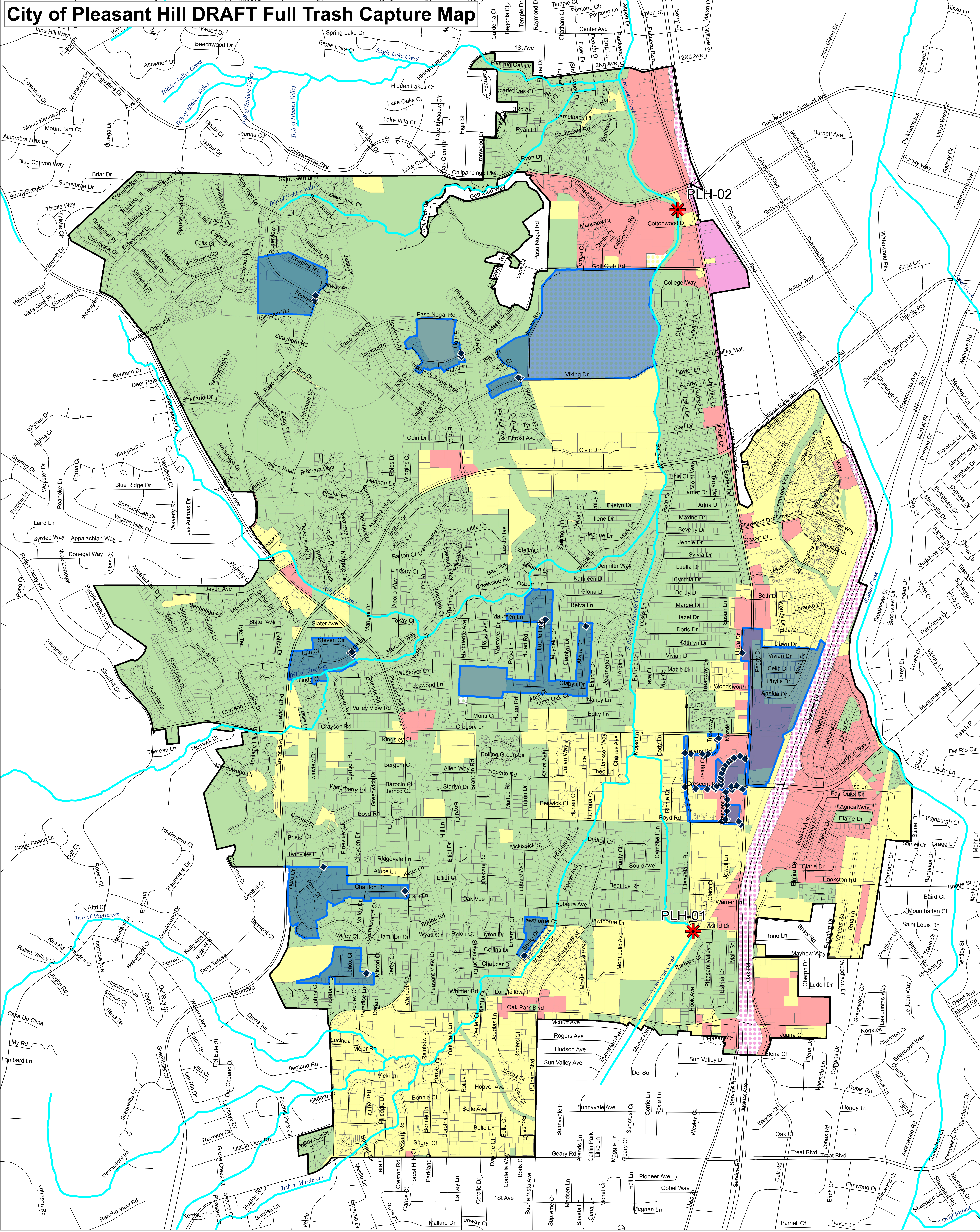


Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map

Map Created By:
EOA, Inc.

Date:
December 3rd, 2013

City of Pleasant Hill DRAFT Full Trash Capture Map



Legend

Trash Generation Category

Low

Medium

High

Very High

Creek/Shoreline Hotspot

Full-Capture Location

Full Trash Capture

Non-Jurisdictional (Dot color = Generation Category)

Streets

Agency Boundary

Creeks

Parcel Boundary

0

0.2

0.4

0.8 Miles

N

Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map

Map Created By:
EOA, Inc.

Date:
September 9th, 2013